REMARKS

This is a full and timely response to the outstanding final Office Action mailed December 14, 2005. Upon entry of the amendments in this response, claims 1 – 29 and 31 – 64 remain pending. In particular, Applicants amend claims 1, 31 – 34, 39, 63, and 64. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

I.   Claim Objections

The Office Action indicates that claims 31 – 38 are objected to because claims 31 – 34 directly depend on canceled claim 30. In an effort to comply with the Office Action's request, Applicants amend claims 31 – 34 to depend from independent claim 1. Applicants respectfully submit that claims 31 – 38 are now in condition for allowance.

II.   Rejections Under 35 U.S.C. §102

A proper rejection of a claim under 35 U.S.C. §102 requires that a single cited art reference disclose each element of the claim. *See, e.g., W.L. Gore & Assoc., Inc. v. Garlock, Inc.,* 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983).

A.   Claim 1 is Patentable Over *Pandya*

The Office Action indicates that claim 1 stands rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent Number 6,671,724 ("*Pandya*"). Applicants respectfully traverse this rejection on the grounds that *Pandya* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 1, as amended, recites:

A method of providing network access across a shared communications medium in a downstream direction towards competing users, comprising the steps of:

(a) monitoring network access usage by at least one user during a time interval;

(b) *determining whether the at least one user has previously been assigned a forecast function*;

(c) in response to determining that the at least one user has not previously been assigned a forecast function, *assigning a forecast function to the at least one user*;

(d) forecasting downstream network access usage by the at least one user during a future time interval based on said monitored network access usage by the at least one user and said forecast function; and

(e) based on said forecasting, allocating network access to each user on a per user basis for a future time interval. *(emphasis added)*

Applicants respectfully submit that *Pandya* fails to disclose, teach, or suggest a "method of providing network access across a shared communications medium in a downstream direction towards competing users, comprising the steps of... *determining whether the at least one user has previously been assigned a forecast function*... [and] in response to determining that the at least one user has not previously been assigned a forecast function, *assigning a forecast function to the at least one user*" as recited in claim 1, as amended. More specifically, *Pandya* appears to disclose "various methods that may be implemented by traffic module 160 to dynamically allocate bandwidth" (col. 16, line 29). However, *Pandya* does not disclose, teach, or suggest a "method of providing network access across a shared communications medium in a downstream direction towards competing users, comprising the steps of ... *determining whether the at least one user has previously been assigned a forecast function*... and in response to determining that the at least one user has not previously been assigned a forecast function, *assigning a forecast function to the at least one user*" as recited in claim 1, as amended. For at least this reason, Applicants submit that claim 1, as amended, is allowable over the cited art.

B.   Claim 39 is Patentable Over _Pandya_

The Office Action indicates that claim 39 stands rejected under 35 U.S.C. §102(e) as

allegedly being anticipated by U.S. Patent Number 6,671,724 ("_Pandya_"). Applicants

respectfully traverse this rejection on the grounds that _Pandya_ does not disclose, teach, or suggest

all of the claimed elements. More specifically, claim 39, as amended, recites:

> A method of providing network access across a shared communications medium between competing users, comprising the steps of:
> (a) monitoring network access usage by at least one user during a time interval;
> (b) determining whether the at least one user has been assigned a forecast function;
> (c) in response to determining that the at least one user has been assigned a forecast function, _determining whether to check for a seasonal cycle related to the user_;
> (d) in response to determining to check for a seasonal cycle, _executing a seasonal identifier algorithm_;
> (e) forecasting upstream and downstream network access usage by the at least one user during a future time interval based on said monitored network access usage by the at least one user; and
> (f) based on said forecasted network access usage, allocating network access to the at least one user for the future time interval. _(emphasis added)_

Applicants respectfully submit that _Pandya_ fails to disclose, teach, or suggest a "method

of providing network access across a shared communications medium between competing users,

comprising the steps of… in response to determining that the at least one user has been assigned

a forecast function, _determining whether to check for a seasonal cycle related to the user_…

[and] in response to determining to check for a seasonal cycle, _executing a seasonal identifier_

algorithm" as recited in claim 39, as amended. More specifically, _Pandya_ appears to disclose

"various methods that may be implemented by traffic module 160 to dynamically allocate

bandwidth" (col. 16, line 29). However, *Pandya* does not disclose, teach, or suggest a "method of providing network access across a shared communications medium between competing users, comprising the steps of... in response to determining that the at least one user has been assigned a forecast function, ***determining whether to check for a seasonal cycle related to the user***... [and] in response to determining to check for a seasonal cycle, ***executing a seasonal identifier algorithm***" as recited in claim 39, as amended. For at least this reason, Applicants submit that claim 39, as amended, is allowable over the cited art.

C.   Claims 2 – 4, 6, 8 – 11, 13, 15 – 25, 28 – 31, 33 – 37, 40, 42 – 54, 57 – 59, 61, and 62 are Patentable Over Pandya

The Office Action indicates that claims 2 – 4, 6, 8 – 11, 13, 15 – 25, 28 – 31, 33 – 37, 40, 42 – 54, 57 – 59, 61, and 62 stand rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent Number 6,671,724 ("*Pandya*"). Applicants respectfully traverse this rejection on the grounds that *Pandya* does not disclose, teach, or suggest all of the claimed elements. More specifically, dependent claims 2 – 4, 6, 8 – 11, 13, 15-25, 28 – 31, and 33 – 37 are believed to be allowable for at least the reason that these claims depend from allowable independent claim 1. Dependent 40, 42 – 54, 57 – 59, 61, and 62 are believed to be allowable for at least the reason that these claims depend from allowable independent claim 39. *In re Fine, Minnesota Mining and Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

III.   Rejections Under 35 U.S.C. §103

In order for a claim to be properly rejected under 35 U.S.C. §103, the teachings of the cited art reference must suggest all features of the claimed invention to one of ordinary skill in the art.

See, e.g., In re Dow Chemical, 837 F.2d 469, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988); *In re Keller*, 642 F.2d 413, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981). Further, "[t]he PTO has the burden under section 103 to establish a prima facie case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." *In re Fine, Minnesota Mining and Mfg.Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

A.   Claim 63 is Patentable Over *Pandya* in view of *Farah*

The Office Action indicates that independent claim 63 stands rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over *Pandya* in view of U.S. Patent Number 6,567,418 ("*Farah*"). Applicants respectfully traverse this rejection for at least the reason that *Pandya* in view of *Farah* fails to disclose, teach, or suggest all of the elements of independent claim 63. More specifically, claim 63, as amended recites:

> A method of providing network access across a shared communications medium of a Cable Network between competing users, comprising the steps of:
> (a) monitoring network access usage by at least one user for a time interval;
> (b) *determining whether the at least one user has previously been assigned a forecast function*;
> (c) in response to determining that the at least one user has not been assigned a forecast function, *assigning a forecast function to the at least one user*;
> (d) based on said monitoring and said assigned forecast function, forecasting the number of logical data units (LDUs) of at least one user that will be transmitted over a future time interval; and
> (d) based on said forecasting, allocating network access available to the at least one user for the future time interval. *(emphasis added)*

Applicants respectfully submit that *Pandya* fails to disclose, teach, or suggest a "method of providing network access across a shared communications medium of a Cable Network between competing users, comprising the steps of... *determining whether the at least one user has previously been assigned a forecast function*... [and] in response to determining that the at least one user has not been assigned a forecast function, *assigning a forecast function to the at least one user*" as recited in claim 63, as amended. More specifically, *Pandya* appears to disclose "various methods that may be implemented by traffic module 160 to dynamically allocate bandwidth" (col. 16, line 29). However, *Pandya* does not disclose, teach, or suggest a "method of providing network access across a shared communications medium of a Cable Network between competing users, comprising the steps of... *determining whether the at least one user has previously been assigned a forecast function*... [and] in response to determining that the at least one user has not been assigned a forecast function, *assigning a forecast function to the at least one user*" as recited in claim 63, as amended. Additionally, *Farah* fails to overcome the deficiencies of *Pandya*. For at least these reasons, Applicants submit that claim 63, as amended, is allowable over the cited art.

B.   Claim 64 is Patentable Over *Pandya* in view of *Farah*

The Office Action indicates that independent claim 64 stands rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over *Pandya* in view of U.S. Patent Number 6,567,418 (*"Farah"*). Applicants respectfully traverse this rejection for at least the reason that *Pandya* in view of *Farah* fails to disclose, teach, or suggest all of the elements of independent claim 64. More specifically, claim 64, as amended recites:

A method of providing network access across a shared communications medium of a Cable Network between competing users, comprising the steps of:

(a) monitoring network access usage requested by each user for a time interval;

(b) *determining whether the at least one user has previously been assigned a forecast function*;

(c) in response to determining that the at least one user has been previously been assigned a forecast function, *determining whether to check for a seasonal cycle related to the user*; and

(d) forecasting the number of logical data units (LDUs) that will be requested by each user over a future time interval based on said monitoring and said forecast function; and

(c) based on said forecasting, allocating network access available to each user for the future time interval. *(emphasis added)*

Applicants respectfully submit that *Pandya* fails to disclose, teach, or suggest a "method of providing network access across a shared communications medium of a Cable Network between competing users, comprising the steps of *determining whether the at least one user has previously been assigned a forecast function*... [and] in response to determining that the at least one user has been previously been assigned a forecast function, *determining whether to check for a seasonal cycle related to the user*" as recited in claim 64, as amended. More specifically, *Pandya* appears to disclose "various methods that may be implemented by traffic module 160 to dynamically allocate bandwidth" (col. 16, line 29). However, *Pandya* does not disclose, teach, or suggest a "method of providing network access across a shared communications medium of a Cable Network between competing users, comprising the steps of *determining whether the at least one user has previously been assigned a forecast function*... [and] in response to determining that the at least one user has been previously been assigned a forecast function, *determining whether to check for a seasonal cycle related to the user*" as recited in claim 64, as

amended. Additionally, *Farah* fails to overcome the deficiencies of *Pandya*. For at least these

reasons, Applicants submit that claim 64, as amended, is allowable over the cited art.

C.   Claims 5 and 7 are Patentable Over *Pandya* in view of *Barnes*

The Office Action indicates that dependent claims 5 and 7 stand rejected under 35 U.S.C.

103(a) as being unpatentable over *Pandya* in view of U.S. Patent Number 6,529,486 ("*Barnes*").

Applicants respectfully traverse this rejection for at least the reason that *Pandya* in view of

Barnes fails to disclose, teach, or suggest all of the elements of claims 5 and 7. More

specifically, dependent claims 5 and 7 are believed to be allowable for at least the reason that

these claims depend from allowable independent claim 1. *In re Fine, Minnesota Mining and*

Mfg.Co. v. Chemque, Inc., 303 F.3d 1294, 1299 (Fed. Cir. 2002).

D.   Claims 12, 38, and 60 are Patentable Over *Pandya* in view of *Hanko*

The Office Action indicates that dependent claims 12, 38, and 60 stand rejected under 35

U.S.C. 103(a) as being unpatentable over *Pandya* in view of U.S. Patent Number 6,438,141

("*Hanko*"). Applicants respectfully traverse this rejection for at least the reason that *Pandya* in

view of *Hanko* fails to disclose, teach, or suggest all of the elements of claims 12, 38, and 60.

More specifically, dependent claims 12 and 38 are believed to be allowable for at least the reason

that these claims depend from allowable independent claim 1. Dependent claim 60 is believed to

be allowable for at least the reason that this claim depends from allowable independent claim 39.

In re Fine, Minnesota Mining and Mfg.Co. v. Chemque, Inc., 303 F.3d 1294, 1299 (Fed. Cir.

2002).

E.   Claim 14 are Patentable Over *Pandya* in view of *Farah*

The Office Action indicates that claim 14 stands rejected under 35 U.S.C. 103(a) as being

unpatentable over *Pandya* in view of U.S. Patent Number 6,567,418 ("*Farah*"). Applicants

respectfully traverse this rejection for at least the reason that *Pandya* in view of *Farah* fails to

disclose, teach, or suggest all of the elements of claim 14. More specifically, dependent claim 14

is believed to be allowable for at least the reason that this claim depends from allowable

independent claim 1. *In re Fine, Minnesota Mining and Mfg.Co. v. Chemque, Inc.*, 303 F.3d

1294, 1299 (Fed. Cir. 2002).

F.   Claims 26 and 55 are Patentable Over *Pandya* in view of *Gemar*

The Office Action indicates that claims 26 and 55 stand rejected under 35 U.S.C. 103(a)

as being unpatentable over *Pandya* in view of U.S. Patent Number 6,483,839 ("*Gemar*").

Applicants respectfully traverse this rejection for at least the reason that *Pandya* in view of

Gemar fails to disclose, teach, or suggest all of the elements of claims 26 and 55. More

specifically, dependent claims 26 are believed to be allowable for at least the reason that this

claim depends from allowable independent claim 1. Dependent claim 55 is believed to be

allowable for at least the reason that this claim depends from allowable independent claim 39. *In*

re Fine, Minnesota Mining and Mfg.Co. v. Chemque, Inc., 303 F.3d 1294, 1299 (Fed. Cir. 2002).

G.   Claims 27 and 56 are Patentable Over *Pandya* in view of *Hou*

The Office Action indicates that claims 27 and 56 stand rejected under 35 U.S.C. 103(a)

as being unpatentable over *Pandya* in view of U.S. Patent Number 6,324,184 ("*Hou*").

Applicants respectfully traverse this rejection for at least the reason that *Pandya* in view of *Hou*

fails to disclose, teach, or suggest all of the elements of claims 27 and 56. More specifically, dependent claims 27 is believed to be allowable for at least the reason that this claim depends from allowable independent claim 1. Dependent claim 56 is believed to be allowable for at least the reason that this claim depends from allowable independent claim 39. *In re Fine, Minnesota Mining and Mfg.Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

H.   Claims 32 and 41 are Patentable Over *Pandya* in view of *Huang*

The Office Action indicates that claims 32 and 41 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Pandya* in view of U.S. Patent Number 6,151,852 ("*Huang*"). Applicants respectfully traverse this rejection for at least the reason that *Pandya* in view of *Huang* fails to disclose, teach, or suggest all of the elements of claims 32 and 41. More specifically, dependent claim 32 is believed to be allowable for at least the reason that this claim depends from allowable independent claim 1. Dependent claim 41 is believed to be allowable for at least the reason that this claim depends from allowable independent claim 39. *In re Fine, Minnesota Mining and Mfg.Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).
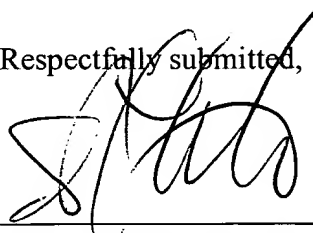
CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested.

Any other statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Further, any and all findings of well-known art and official notice, or statements interpreted similarly, should not be considered well known for at least the specific and particular reason that the Office Action does not include specific factual findings predicated on sound technical and scientific reasoning to support such conclusions.

If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,

Jeffrey R. Kuester, Reg. No. 34,367

THOMAS, KAYDEN,
 HORSTEMEYER & RISLEY, L.L.P.
Suite 1750
100 Galleria Parkway N.W.
Atlanta, Georgia 30339
(770) 933-9500